

North Lily Heap Leach Facility
Heap Leach Discharge Report
Fourth Quarter

Permit No. UGW230001
North Lily Mining Ltd Heap Leach Facility
Juab County Utah, Utah
March 2002

Prepared for:

State of Utah
Division of Water Quality
Department of Environmental Quality
P.O. Box 144870
Salt Lake City, Utah 84114-4870
Attention: Ground Water Protection Section

Prepared by:

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1.0 Introduction

On behalf of North Lily Mining Company (NLMC), JBR Environmental Consultants, Inc. (JBR) is reporting the 4th quarter results of the Heap Leach effluent monitoring performed at the North Lily Heap Leach property located 5 miles south of Eureka, Utah, on Highway 6 (Figure 1). The effluent monitoring was performed as part of the stipulations stated in the Final Ground Water Discharge Permit No. UGW230001. This report includes a discussion of the field and laboratory activities performed to date. The most recent laboratory results are included in Appendix A and the latest discharge data are included in Appendix B.

2.0 Methods

2.1 Weekly Site Survey

A JBR associate visits the North Lily site weekly to conduct a site specific survey of the property. The site survey consists of: monitoring the water flow (discharge) at the upper distribution box, visual observations of the discharge water, inspection of the property and the perimeter fence, observation of the soil conditions (any signs of erosion), and examination of the vegetation growth in the reclaimed areas.

Monitoring of the upper distribution box consists of removing three covers placed on top of the distribution box to enable a visual inspection of the leachate from the heap as it enters the distribution box. Once a visual observation has been made and noted, the discharge rate is measured using a one gallon container and a stop watch.

2.2 Quarterly Sampling Event

The sampling events are conducted on a quarterly schedule as shown in Table 2-1 and is tested for the analytes listed in Table 2-2. The events consist of a site survey of the North Lily property and then the sampling of the discharge water at the upper distribution box. The three protective covers are removed to allow access to the inflowing discharge and an observation of the water is made and noted. Using a laboratory supplied 1-quart bottle, the discharge sample is collected and placed into the 1, 1 liter and 3, 0.5 liter laboratory supplied sample bottles. The sample is then placed into a cooler containing ice pending the delivery to Chemtech- Ford Analytical Laboratories for Analysis. The sample is stored and transported using chain-of-custody procedures.

Table 2-1 Compliance Monitoring Reporting Schedule

Quarter	Report Due On
<u>1st (Jan., Feb., March)</u>	<u>April 15th</u>
<u>2nd (April, May, June)</u>	<u>July 15th</u>
<u>3rd (July, Aug., Sept.)</u>	<u>October 15th</u>
<u>4th (Oct., Nov., Dec.)</u>	<u>January 15th</u>

Table 2-2 Analytes

Parameters	(UGWQS)	Parameters	(UGWQS)
pH	6.5-8.5	Calcium (mg/l) (* or ****)	NS
Conductance (umhos/cm) (*)	NS	Chromium (mg/l) (****)	0.1
Alkalinity as Bicarbonate (mg/l)(*)	NS	Copper (mg/l) (****)	1.3
Total Hardness (mg/l) (*)	NS	Magnesium (mg/l) (* or ****)	NS
Chloride (mg/l) (*)	NS	Manganese (mg/l) (****)	NS
Cyanide, Amenable to Cl ₂ (mg/l) (**)	NS	Potassium (mg/l) (*)	NS
Cyanide, Total (mg/l) (**)	NS	Sodium (mg/l) (*)	NS
Cyanide, WAD (mg/l) (**)	0.2 (free)	Zinc (mg/l) (****)	5.0
Fluoride (*)	4.0	Arsenic (mg/l) (* or ****)	0.05
Nitrite, Nitrogen (mg/l) (***)	1.0	Cadmium (mg/l) (****)	0.005
Nitrate+Nitrite Total (mg/l) (***)	10.0	Mercury (mg/l) (****)	0.002
Sulfate (mg/l) (*)	NS	Lead (mg/l) (****)	0.015
Barium (mg/l) (* or ****)	2.0	Selenium (mg/l) (* or ****)	0.05
TDS (mg/l) (*)	NS	Silver (mg/l) (****)	0.1

Notes: (UGWQS) is Utah Ground Water Quality Standard, and NS indicates that there is not a Utah Ground Water Standard.

*=1 L untreated,

**= 0.5 L treated w/ NaOH,

***=0.5 L treated w/ H₂SO₄ (nutrients),

****= 0.5 L treated w/ HNO₃ (metals)

3.0 Results

3.1 Weekly Site Survey

The weekly site visits have shown a steady decrease in Heap Leach Mound discharge since July of 2000. Recently there has been a slight increase in discharge from a low of 2.2 gpm on December 25, 2001 to 2.8 gpm on January 9, 2002. This slight increase is still within permit limits and can probably be attributed to snow melt on the mound. The discharge may be expected to increase and decrease through the winter months as a result of snowfall and the subsequent snow melt.

3.2 Quarterly Sampling Event

JBR visited the site on November 27, 2001 to sample the Heap Leach Discharge effluent at the upper distribution box. The results of the sampling event along with the previous sampling results have been compiled and shown on Table 3-1. The laboratory reports and chain-of-custody documents for the 4th quarter sampling event can be found in Appendix A while the field notes can be found in Appendix C.

Table 3-1 Water Quality Summary

Date	??-99	Apr-00	Aug-00	May-01	Aug-02	Nov-02	Utah Ground Water Standard
Sampled by	DWQ	DWQ	JBR	JBR	JBR	JBR	
Parameter							
pH	9.1	8.7	8.1	8.2	7.8	7.6	6.5-8.5
Conductance (umhos/cm)	23,000	22,000	23,300	22,000	19,000	21,000	NS
TDS (mg/l)	19,510	18,358	20,000	NA	NA	NA	NS
Alkalinity as Bicarbonate (mg/l)	364	248	388	280	360	350	NS
Total Hardness (mg/l)	1,409.8	1,296.4	NA	NA	NA	NA	NS
Chloride (mg/l)	2,125	2,025	2,220	2,100	1,900	1,900	NS
Cyanide, Amenable to Cl ₂ (mg/l)	20.865	34.87	18.8	16	4.3	2.8	NS
Cyanide, Total (mg/l)	20.9	35	19.0	16	4.4	3.1	NS
Cyanide, WAD (mg/l)	NA	NA	14.40	12	0.52	0.42	0.2 (free)
Fluoride	NA	NA	6.7	5.6	3.2	3.2	4.0
Nitrite, Nitrogen mg/l)	NA	NA	51	57	81	130	1.0
Nitrate + Nitrite Total (mg/l)	124	2,110	145	160	280	310	10.0
Sulfate (mg/l)	11,000	4,560	10,200	11,000	7,800	8,000	NS
Barium (mg/l)	0.015	ND	0.010	0.045	0.015	0.012	2.0
Calcium (mg/l)	539	481	350	280	400	410	NS

Table 3-1 (Cont.)

Chromium (mg/l)	0.009	ND	ND	ND	ND	ND	0.1
Copper (mg/l)	5.70	0.332	19	15	3.1	2.6	1.3
Magnesium (mg/l)	15.8	0.234	29	110	48	53	NS
Manganese (mg/l)	0.130	0.110	NA	NA	NA	NA	NS
Potassium (mg/l)	297	293	310	260	240	220	NS
Sodium (mg/l)	5,570	5,500	5,600	5,100	5,100	4,900	NS
Zinc (mg/l)	91	ND	0.42	0.48	1.4	2.2	5.0
Arsenic (mg/l)	0.900	76	0.2464	0.17	0.14	0.17	0.05
Cadmium (mg/l)	ND	ND	0.0076	0.006	0.0097	0.021	0.005
Mercury (mg/l)	NA	0.089	ND	0.019	0.015	0.0060	0.002
Lead (mg/l)	0.076	0.009	0.1581	0.2	0.085	0.18	0.015
Selenium (mg/l)	0.200	0.014	0.2707	0.15	0.12	0.20	0.05
Silver (mg/l)	0.370	0.029	0.3147	0.64	0.08	0.069	0.1

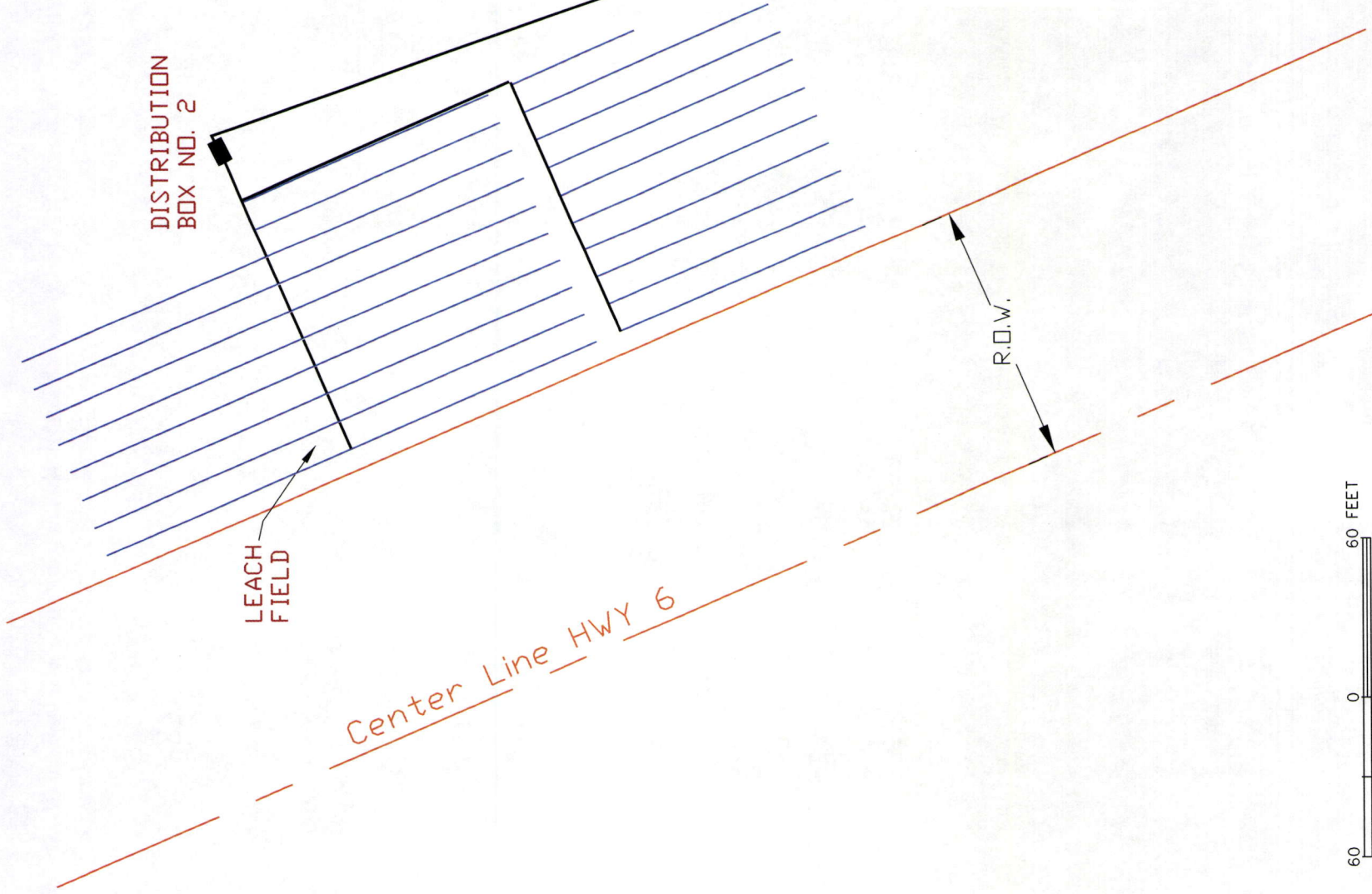
In most cases, the 4th quarter results show that the concentrations of the analytes remained similar to , or below, those reported in the previous samples.

4.0 Discussion and Conclusions

Overall, the 2.5 years of sampling data shown in Table 3-1 indicate that the concentrations present in the Heap Leach Draindown continue to diminish in response to natural processes. Occasional increases in contaminant concentrations may be expected over time in response to the heterogeneities in the Heap Leach Mound discharge. It is expected that the natural processes as well as the reclamation work conducted at the site will contribute to the overall decrease in contaminant concentrations in the future.

Figure

POWER LINE
* V-POLE C.P. * E-POLE C.P.



EXPLANATION

--- LOCATION OF FORMER SOLUTION PONDS

--- CLASS IIIb LAND FILL

DRAIN FIELD

— 4 INCH SOLID PVC PIPE

— 4 INCH PERFORATED

PVC LATERALS

NORTH LILY

FIGURE 1
SITE MAP

jbr		environmental consultants, inc.		DATE	5/16/01
Salt Lake City, Utah		Cedar City, Utah		DRAWN	1/14/02
RENO, NEVADA		ELKO, NEVADA		REVISION	2/26/02
DESIGN	JS	DRAWN	CP	CH'D	BY
				SCALE 1" = 60'	

Appendix A

Laboratory Results

RECEIVED JAN - 3 2002

Date: 12/28/01

JBR Consultants
attn. Jim Sage
8160 South Highland Drive, Ste. A-4
Sandy, UT 84093

Project: N LILY-01

Project Group No. 50781
Date Sample(s) Submitted: 11/27/01

This is the final report for project 50781 and contains 3 pages of information in addition to attachments. Individual pages or sections of this report may not be separated when using the information for regulatory compliance.

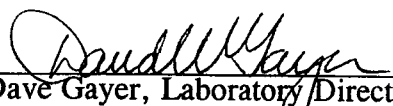
The analyses presented on this report were performed in accordance with National Environmental Laboratory Accreditation Program (NELAP), Section 5.13.

Please feel free to contact us at (801) 262-7299 or (801) 262-7378 (fax) if you have questions or comments regarding this report.

Dave Gayer
Laboratory Director
dave@chemtechford.com

Linda Daniels
Customer Representative

Approved By: _____


Dave Gayer, Laboratory Director

6100 SOUTH STRATLER
SALT LAKE CITY UTAH 84107 6905
801 262 7299 PHONE
801 262 7378 FAX

Lab No: 01-U011383
Report Date: 12/28/01

JBR Consultants
attn. Jim Sage
8160 South Highland Drive, Ste. A-4
Sandy, UT 84093

CERTIFICATE OF ANALYSIS

Sample Description: MW- 11/27/01
Project: N LILY-01
Sample Matrix: WASTE WATER
Lab Group No: 50781
Date/Time Sampled: 11/27/01 , 12:00
Date/Time Received: 11/27/01 , 16:45
Sample Note(s):

Sample received on ice.

PARAMETER / UNITS	RESULT	MRL	DATE ANALYZED	METHOD	ANALYST
INORGANIC PARAMETERS					
Alkalinity, as Bicarbonate, mg/L	350	1	11/29/01 14:45	SM 2320B	CSM
Alkalinity, as Carbonate, mg/L	< 1	1	11/29/01 14:45	SM 2320B	CSM
Chemical Oxygen Demand, mg/L	350	10	12/ 4/01 16:00	HACH 8000	CSM
Chloride, mg/L	1,900	10	12/10/01 17:00	EPA 300.0	CSM
Conductance, Specific, umhos/cm	21,000	1	12/13/01 9:00	EPA 120.1	TAH
Cyanide, Amenable to Cl ₂ , mg/L	2.8	0.008	12/ 7/01 15:00	ASTM D2036	TC
Cyanide, Total, mg/L	3.1	0.1	12/ 3/01 15:00	ASTM D2036	TC
Cyanide, WAD, mg/L	0.42	0.01	12/ 3/01 15:00	ASTM D2036	TC
Fluoride, mg/L	3.2	0.1	12/ 7/01 12:43	EPA 300.0	CSM
Nitrate, Nitrogen (Calc.), mg/L	310	40	12/ 4/01 14:00	EPA 353.1	TSM
Nitrite, Nitrogen, mg/L	130	6.2	11/27/01 17:00	EPA 354.1	TSM
pH, units	7.6	0.1	12/14/01 14:20	EPA 150.1	EJB
Sulfate, mg/L	8,000	50	12/13/01 18:00	EPA 300.0	CSM
Barium (T), as Ba, mg/L	0.012	0.005	12/ 6/01 12:32	EPA 200.7	MJB
Calcium (T), as Ca, mg/L	410	0.2	12/ 6/01 12:32	EPA 200.7	MJB
Chromium (T), as Cr, mg/L	< 0.005	0.005	12/ 6/01 12:32	EPA 200.7	MJB
Copper (T), as Cu, mg/L	2.6	0.01	12/ 6/01 12:32	EPA 200.7	MJB
Magnesium (T), as Mg, mg/L	53	0.2	12/ 6/01 12:32	EPA 200.7	MJB
Potassium (T), as K, mg/L	220	0.2	12/ 6/01 12:32	EPA 200.7	MJB
Zinc (T), as Zn, mg/L	2.2	0.01	12/ 6/01 12:32	EPA 200.7	MJB
Arsenic (T), as As, mg/L	0.17	0.0005	12/11/01 13:32	EPA 200.8	JJT
Cadmium (T), as Cd, mg/L	0.021	0.0005	12/11/01 13:32	EPA 200.8	JJT
Lead (T), as Pb, mg/L	0.18	0.005	12/11/01 13:32	EPA 200.8	JJT
Mercury (T), as Hg, mg/L	0.0060	0.0002	12/11/01 13:32	EPA 200.8	JJT
Selenium (T), as Se, mg/L	0.20	0.0005	12/11/01 13:32	EPA 200.8	JJT
Silver (T), as Ag, mg/L	0.069	0.0005	12/11/01 13:32	EPA 200.8	JJT

MRL = Minimum Reporting Limit

Lab No: 01-U011383
Report Date: 12/28/01

JBR Consultants
attn. Jim Sage
8160 South Highland Drive, Ste. A-4
Sandy, UT 84093

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Sample Description: MW- 11/27/01
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Sample Matrix: WASTE WATER
Lab Group No: 50781
Date/Time Sampled: 11/27/01 , 12:00
Date/Time Received: 11/27/01 , 16:45
Sample Note(s):

Sample received on ice.

PARAMETER / UNITS	RESULT	MRL	DATE ANALYZED	METHOD	ANALYST
INORGANIC PARAMETERS					
Temperature, Receiving, C	1.0		11/27/01 16:45		SPS

CHEMTECH - FORD, INC.

COMPANY: JBR ENVIRONMENTAL
 ADDRESS: 8160 SO HIGHLAND DRIVE
 CITY/STATE/ZIP: SLC, UT 84143
 PHONE #: (801) 943-4104 FAX #: (801) 942-1852
 COMPANY CONTACT: Jim Saeff
 PROJECT: N LLY-01

Mark 'X' for copy to DEQ Div of Drinking Water

ANALYSIS REQUEST FORM/CHAIN OF CUSTODY

BILLING NAME: (SAME)
 BILLING ADDRESS:
 P.O. #:
 TURNAROUND REQUIRED*
 *expedited turnaround subject to additional charge

Lab ID#	IDENTIFICATION/LOCATION	SAMPLE DATE	SAMPLE TIME	MATRIX					ANALYTES REQUESTED
				Water: Drink, Waste, Ground (circle)	Soil / Solid (circle)	Sludge: Solid, Liquid (circle)	Oil	Solvent	
11383	1. MW- 11/27/01	11/27/01	16:00	X					
	2.								
	3.								
	4.								
	5.								
	6.								
	7.								
	8.								
	9.								
	10.								

Number of Containers: 4

Sampled by: (signature) JAMES R. SAEFF

Sampled by: (print) JAMES R. SAEFF

Sample Receiving Temperature: (C)

Special Instructions:

Relinquished by: (signature)	Date/Time	Received by (signature)	Date/Time
	11/27/01 1645	SP Saeff	11-27-01/16:45
Relinquished by: (signature)		Received by (signature):	
Relinquished by: (signature)		Received by (signature):	

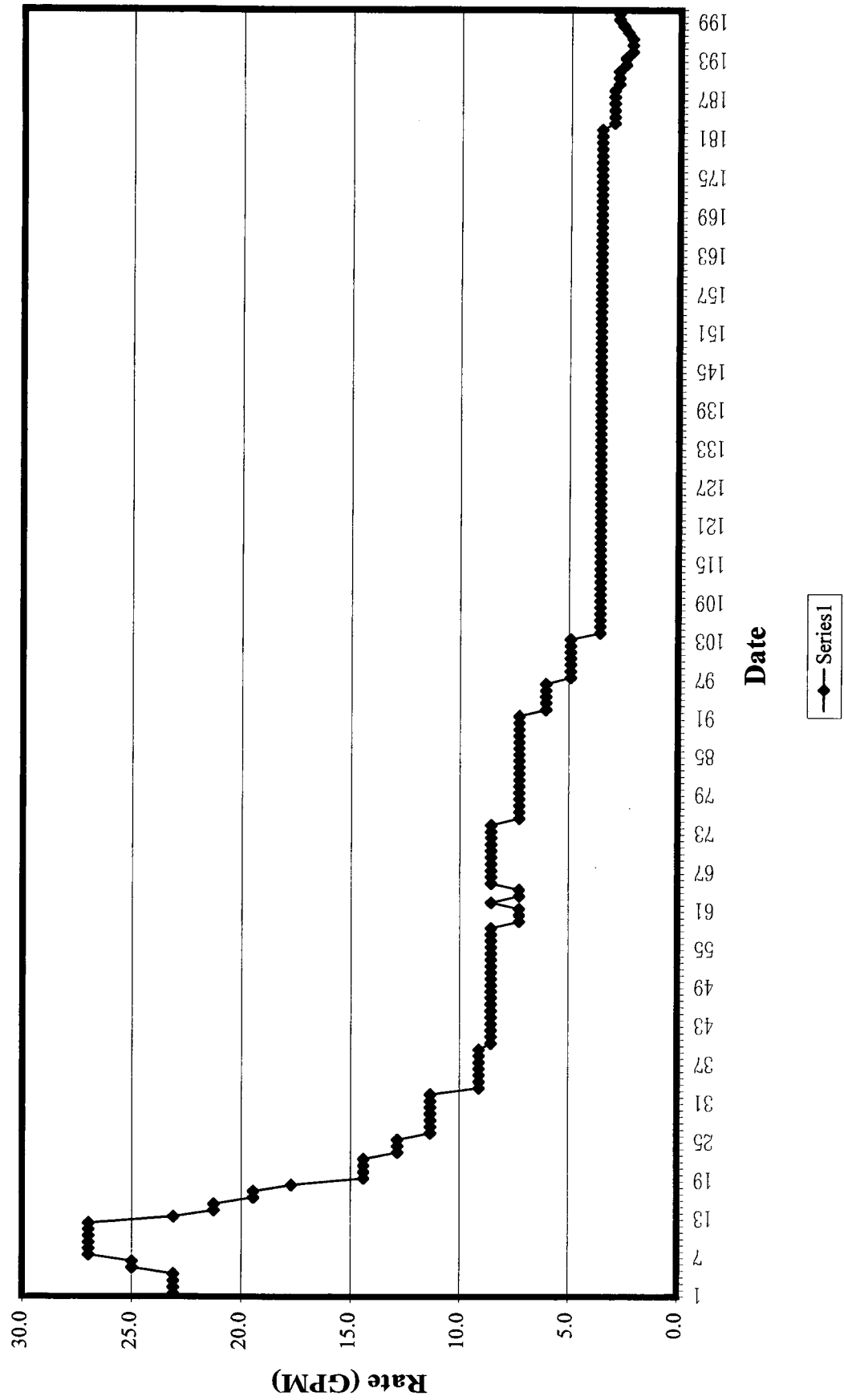
CHEMTECH-FORD, INC. 6100 South Stratler (380 West) Murray, UT 84107 Phone 801-262-7299 Fax 801-262-7378
 NET 30 DAYS: 1.5% PER MONTH INTEREST CHARGE (18% A.P.R.) CUSTOMER AGREES TO PAY COLLECTION COSTS AND ATTORNEY'S FEES.

WHITE: ORIGINAL YELLOW: CUSTOMER PINK: FILE

Appendix B

Heap Leach Discharge

Heap Leach Pad Discharge



North Lily Mining Company
EVAPORATION SYSTEM/LEACH FIELD GALLERY

Date	Daily Average (GPM)	Application Stie	Return Rate (Feet)	ReturnRate (GPM)	Amount Pumped From Preg Pond
July 3, 2000	100	N/A	N/A		
July 4, 2000	100	N/A	N/A		
July 5, 2000	100	N/A	N/A		270
July 6, 2000	100	N/A	N/A		
July 7, 2000	100	N/A	N/A		
July 10, 2000	95	N/A	N/A		
July 11, 2000	95	N/A	N/A		
July 12, 2000	90	N/A	N/A		260
July 13, 2000	90	N/A	N/A		
July 14, 2000	95	N/A	N/A		
July 15, 2000	225	N/A	N/A		
July 17, 2000	N/A	Recycle into Preg	N/A		
July 18, 2000	220	N/A	N/A		
July 19, 2000	220	N/A	N/A		250
July 20, 2000	220	N/A	N/A		
July 21, 2000	220	N/A	N/A		
July 24, 2000	N/A	Recycle into Preg	N/A		
July 25, 2000	N/A	Recycle into Preg	N/A		280
July 26, 2000	300	Pad and Preg	N/A		
July 27, 2000	300	Pad and Preg	N/A		
July 28, 2000	300	Pad and Preg	N/A		
July 30, 2000	N/A	Recycle into Preg	0.24		
July 31, 2000	N/A	Overflow	0.24		
August 1, 2000	N/A	Overflow	0.24		270
August 2, 2000	N/A	Overflow	0.22		
August 3, 2000	N/A	Overflow	0.22		
August 6, 2000	N/A	Rec	N/A		
August 7, 2000	N/A	Rec	N/A		300
August 8, 2000	360	Pad and Preg	N/A		
August 9, 2000	360	Pad and Preg	N/A		
August 10, 2000	360	Pad and Preg	N/A		200
August 11, 2000	360	Pad and Preg	N/A		
August 12, 2000	360	Pad and Preg	N/A		
August 13, 2000	360	Rec	0.19	23.1	
August 14, 2000	360	Rec	0.19	23.1	
August 15, 2000	360	Rec	0.19	23.1	
August 16, 2000	360	Rec	0.19	23.1	490
August 17, 2000	360	Rec	0.2	25.0	
August 18, 2000	360	Rec	0.2	25.0	
August 19, 2000	360	Rec	0.21	27.0	
August 20, 2000	340	Rec	0.21	27.0	
August 21, 2000	340	Rec	0.21	27.0	
August 22, 2000	340	Rec	0.21	27.0	
August 23, 2000	340	Rec	0.21	27.0	

KEY

N/R = Not Recorded

N/A = Not Available

1/14/02

North Lily Mining Company
EVAPORATION SYSTEM/LEACH FIELD GALLERY

August 24, 2000	340	Rec	0.21	27.0	500
August 27, 2000	350	Preg and Overflow	0.19	23.1	
August 28, 2000	220	Preg and Overflow	0.18	21.3	
August 29, 2000	220	Preg and Overflow	0.18	21.3	
August 30, 2000	340	Preg and Overflow	0.17	19.5	
August 31, 2000	200	Preg and Overflow	0.17	19.5	475
September 1, 2000	210	Preg and Overflow	0.16	17.7	
September 5, 2000	N/A	Recycle to preg pond	0.14	14.4	
September 6, 2000	N/A	Recycle to preg pond	0.14	14.4	
September 7, 2000	N/A	Recycle to preg pond	0.14	14.4	500
September 8, 2000	N/A	Recycle to preg pond	0.14	14.4	
September 9, 2000	N/A	Recycle to preg pond	0.13	12.8	
September 10, 2000	N/A	Recycle to preg pond	0.13	12.8	
September 11, 2000	N/A	Overflow Ponds	0.13	12.8	
September 12, 2000	N/A	Overflow Ponds	0.12	11.3	
September 13, 2000	N/A	Overflow Ponds	0.12	11.3	480
September 14, 2000	N/A	Overflow Ponds	0.12	11.3	
September 15, 2000	N/A	Overflow Ponds	0.12	11.3	
September 16, 2000	N/A	Overflow Ponds	0.12	11.3	
September 18, 2000	N/A	Recycle to preg pond	0.12	11.3	
September 19, 2000	N/A	Recycle to preg pond	0.12	11.3	
September 20, 2000	N/A	Recycle to preg pond	0.11	9.1	490
September 21, 2000	N/A	Recycle to preg pond	0.11	9.1	
September 22, 2000	N/A	Recycle to preg pond	0.11	9.1	
September 23, 2000	N/A	Recycle to preg pond	0.11	9.1	
September 25, 2000	N/A	Recycle to preg pond	0.11	9.1	
September 26, 2000	N/A	Recycle to preg pond	0.11	9.1	
September 27, 2000	N/A	Recycle to preg pond	0.11	9.1	475
September 28, 2000	N/A	Recycle to preg pond	0.10	8.6	
September 29, 2000	N/A	Recycle to preg pond	0.10	8.6	
October 2, 2000	N/A	Recycle to preg pond	0.10	8.6	
October 3, 2000	N/A	Recycle to preg pond	0.10	8.6	
October 4, 2000	N/A	Recycle to preg pond	0.10	8.6	469
October 5, 2000	N/A	Recycle to preg pond	0.10	8.6	
October 6, 2000	N/A	Recycle to preg pond	0.10	8.6	
October 9, 2000	N/A	Recycle to preg pond	0.10	8.6	
October 10, 2000	N/A	Recycle to preg pond	0.10	8.6	
October 11, 2000	N/A	Recycle to preg pond	0.10	8.6	
October 12, 2000	N/A	Recycle to preg pond	0.10	8.6	490
October 13, 2000	N/A	Recycle to preg pond	0.10	8.6	
October 16, 2000	N/A	Recycle to preg pond	0.10	8.6	
October 17, 2000	N/A	Recycle to preg pond	0.10	8.6	
October 18, 2000	N/A	Recycle to preg pond	0.10	8.6	480
October 19, 2000	N/A	Recycle to preg pond	0.10	8.6	
October 20, 2000	N/A	Recycle to preg pond	0.10	8.6	
October 23, 2000	N/A	Recycle to preg pond	0.10	8.6	
October 24, 2000	N/A	Recycle to preg pond	0.10	8.6	
October 25, 2000	N/A	Recycle to preg pond	0.09	7.3	440

KEY

N/R = Not Recorded

N/A = Not Available

1/14/02

North Lily Mining Company
EVAPORATION SYSTEM/LEACH FIELD GALLERY

October 26, 2000	N/A	Recycle to preg pond	0.09	7.3	
October 27, 2000	N/A	Recycle to preg pond	0.09	7.3	
November 6, 2000	N/A	Recycle to preg pond	0.10	8.6	
November 7, 2000	N/A	Recycle to preg pond	0.09	7.3	
November 8, 2000	N/A	Recycle to preg pond	0.09	7.3	390
November 9, 2000	N/A	Recycle to preg pond	0.10	8.6	
November 10, 2000	N/A	Recycle to preg pond	0.10	8.6	
November 13, 2000	N/A	Recycle to preg pond	0.10	8.6	
November 14, 2000	N/A	Recycle to preg pond	0.10	8.6	
November 15, 2000	N/A	Recycle to preg pond	0.10	8.6	390
November 16, 2000	N/A	Recycle to preg pond	0.10	8.6	
November 17, 2000	N/A	Recycle to preg pond	0.10	8.6	
November 20, 2000	N/A	Recycle to preg pond	0.10	8.6	
November 21, 2000	N/A	Recycle to preg pond	0.10	8.6	
November 22, 2000	N/A	Recycle to preg pond	0.10	8.6	350
November 23, 2000	N/A	Recycle to preg pond	0.09	7.3	
November 24, 2000	N/A	Recycle to preg pond	0.09	7.3	
November 27, 2000	N/A	Recycle to preg pond	0.09	7.3	
November 28, 2000	N/A	Recycle to preg pond	0.09	7.3	
November 29, 2000	N/A	Recycle to preg pond	0.09	7.3	
November 30, 2000	N/A	Recycle to preg pond	0.09	7.3	300
December 1, 2000	N/A	Recycle to preg pond	0.09	7.3	
December 4, 2000	N/A	Recycle to preg pond	0.09	7.3	
December 5, 2000	N/A	Recycle to preg pond	0.09	7.3	
December 6, 2000	N/A	Recycle to preg pond	0.09	7.3	300
December 7, 2000	N/A	Recycle to preg pond	0.09	7.3	
December 8, 2000	N/A	Recycle to preg pond	0.09	7.3	
December 11, 2000	N/A	Recycle to preg pond	0.09	7.3	
December 12, 2000	N/A	Recycle to preg pond	0.09	7.3	300
December 13, 2000	N/A	Recycle to preg pond	0.09	7.3	
December 14, 2000	N/A	Recycle to preg pond	0.09	7.3	
December 15, 2000	N/A	Recycle to preg pond	0.09	7.3	
December 18, 2000	N/A	Recycle to preg pond	0.08	6.1	
December 19, 2000	N/A	Recycle to preg pond	0.08	6.1	
December 20, 2000	N/A	Recycle to preg pond	0.08	6.1	290
December 21, 2000	N/A	Recycle to preg pond	0.08	6.1	
December 22, 2000	N/A	Recycle to preg pond	0.08	6.1	
December 26, 2000	N/A	Recycle to preg pond	0.07	4.9	
December 27, 2000	N/A	Recycle to preg pond	0.07	4.9	
December 28, 2000	N/A	Recycle to preg pond	0.07	4.9	290
December 29, 2000	N/A	Recycle to preg pond	0.07	4.9	
January 2, 2001	N/A	Recycle to preg pond	0.07	4.9	
January 3, 2001	N/A	Recycle to preg pond	0.07	4.9	
January 4, 2001	N/A	Recycle to preg pond	0.07	4.9	280
January 5, 2001	N/A	Recycle to preg pond	0.06	3.6	
January 8, 2001	N/A	Pump was off	0.06	3.6	
January 9, 2001	N/A	Recycle to preg pond	0.06	3.6	
January 10, 2001	N/A	Recycle to preg pond	0.06	3.6	285

KEY

N/R = Not Recorded

N/A = Not Available

1/14/02

North Lily Mining Company
EVAPORATION SYSTEM/LEACH FIELD GALLERY

January 11, 2001	N/A	Recycle to preg pond	0.06	3.6	
January 12, 2001	N/A	Recycle to preg pond	0.06	3.6	
January 15, 2001	N/A	Pump was off	0.06	3.6	
January 16, 2001	N/A	Recycle to preg pond	0.06	3.6	
January 17, 2001	N/A	Recycle to preg pond	0.06	3.6	270
January 18, 2001	N/A	Recycle to preg pond	0.06	3.6	
January 19, 2001	N/A	Recycle to preg pond	0.06	3.6	
January 22, 2001	N/A	Recycle to preg pond	0.06	3.6	
January 23, 2001	N/A	Recycle to preg pond	0.06	3.6	
January 24, 2001	N/A	Recycle to preg pond	0.06	3.6	290
January 25, 2001	N/A	Recycle to preg pond	0.06	3.6	
January 26, 2001	N/A	Recycle to preg pond	0.06	3.6	
January 29, 2001	N/A	Recycle to preg pond	0.06	3.6	
January 30, 2001	N/A	Recycle to preg pond	0.06	3.6	
January 31, 2001	N/A	Recycle to preg pond	0.06	3.6	285
February 1, 2001	N/A	Recycle to preg pond	0.06	3.6	
February 2, 2001	N/A	Recycle to preg pond	0.06	3.6	
February 5, 2001	N/A	Recycle to preg pond	0.06	3.6	
February 6, 2001	N/A	Recycle to preg pond	0.06	3.6	
February 7, 2001	N/A	Recycle to preg pond	0.06	3.6	285
February 8, 2001	N/A	Recycle to preg pond	0.06	3.6	
February 9, 2001	N/A	Recycle to preg pond	0.06	3.6	
February 12, 2001	N/A	Recycle to preg pond	0.06	3.6	
February 13, 2001	N/A	Recycle to preg pond	0.06	3.6	
February 14, 2001	N/A	Recycle to preg pond	0.06	3.6	320
February 15, 2001	N/A	Recycle to preg pond	0.06	3.6	
February 16, 2001	N/A	Recycle to preg pond	0.06	3.6	
February 17, 2001	N/A	Recycle to preg pond	0.06	3.6	
February 19, 2001	N/A	Recycle to preg pond	0.06	3.6	
February 20, 2001	N/A	Recycle to preg pond	0.06	3.6	
February 21, 2001	N/A	Recycle to preg pond	0.06	3.6	
February 22, 2001	N/A	Recycle to preg pond	0.06	3.6	310
February 23, 2001	N/A	Recycle to preg pond	0.06	3.6	
February 26, 2001	N/A	Recycle to preg pond	0.06	3.6	
February 27, 2001	N/A	Recycle to preg pond	0.06	3.6	
February 28, 2001	N/A	Recycle to preg pond	0.06	3.6	290
March 1, 2001	N/A	Recycle to preg pond	0.06	3.6	
March 2, 2001	N/A	Recycle to preg pond	0.06	3.6	
March 5, 2001	N/A	Recycle to preg pond	0.06	3.6	
March 6, 2001	N/A	Recycle to preg pond	0.06	3.6	
March 7, 2001	N/A	Recycle to preg pond	0.06	3.6	
March 8, 2001	N/A	Recycle to preg pond	0.06	3.6	280
March 9, 2001	N/A	Recycle to preg pond	0.06	3.6	
March 12, 2001	N/A	Recycle to preg pond	0.06	3.6	
March 13, 2001	N/A	Recycle to preg pond	0.06	3.6	
March 14, 2001	N/A	Recycle to preg pond	0.06	3.6	
March 15, 2001	N/A	Recycle to preg pond	0.06	3.6	
March 16, 2001	N/A	Recycle to preg pond	0.06	3.6	280

KEY

N/R = Not Recorded

N/A = Not Available

1/14/02

North Lily Mining Company
EVAPORATION SYSTEM/LEACH FIELD GALLERY

March 19, 2001	N/A	Recycle to preg pond	0.06	3.6	
March 20, 2001	N/A	Recycle to preg pond	0.06	3.6	
March 21, 2001	N/A	Recycle to preg pond	0.06	3.6	
March 22, 2001	N/A	Recycle to preg pond	0.06	3.6	280
March 23, 2001	N/A	Recycle to preg pond	0.06	3.6	
March 26, 2001	N/A	Recycle to preg pond	0.06	3.6	
March 27, 2001	N/A	Recycle to preg pond	0.06	3.6	
March 28, 2001	N/A	Recycle to preg pond	0.06	3.6	
March 29, 2001	N/A	Recycle to preg pond	0.06	3.6	290
March 30, 2001	N/A	Recycle to preg pond	0.06	3.6	
April 2, 2001	N/A	Recycle to preg pond	0.06	3.6	
April 3, 2001	N/A	Recycle to preg pond	0.06	3.6	
April 4, 2001	N/A	Recycle to preg pond	0.06	3.6	
April 5, 2001	N/A	Recycle to preg pond	0.06	3.6	270
April 6, 2001	N/A	Recycle to preg pond	0.06	3.6	
May, 2001 Week 1	N/A	Drain Field	N/A	3.6	N/A
May, 2001 Week 2	N/A	Drain Field	N/A	3.6	N/A
May, 2001 Week 3	N/A	Drain Field	N/A	3.6	N/A
May, 2001 Week 4	N/A	Drain Field	N/A	3.6	N/A
June 6, 2001	N/A	Drain Field	N/A	3.6	N/A
June 13, 2001	N/A	Drain Field	N/A	3.6	N/A
June 20, 2001	N/A	Drain Field	N/A	3.6	N/A
June 27, 2001	N/A	Drain Field	N/A	3.6	N/A
July 3, 2001	N/A	Drain Field	N/A	3.6	N/A
July 11, 2001	N/A	Drain Field	N/A	3.6	N/A
July 18, 2001	N/A	Drain Field	N/A	3.6	N/A
July 23, 2001	N/A	Drain Field	N/A	3.6	N/A
August 1, 2001	N/A	Drain Field	N/A	3.0	N/A
August 8, 2001	N/A	Drain Field	N/A	3.0	N/A
August 15, 2001	N/A	Drain Field	N/A	3.0	N/A
August 21, 2001	N/A	Drain Field	N/A	3.0	N/A
August 29, 2001	N/A	Drain Field	N/A	3.0	N/A
October 17, 2001	N/A	Drain Field	N/A	3.0	N/A
October 24, 2001	N/A	Drain Field	N/A	2.8	N/A
November 1, 2001	N/A	Drain Field	N/A	2.8	N/A
November 7, 2001	N/A	Drain Field	N/A	2.8	N/A
November 12, 2001	N/A	Drain Field	N/A	2.5	N/A
November 20, 2001	N/A	Drain Field	N/A	2.5	N/A
December 1, 2001	N/A	Drain Field	N/A	2.2	N/A
December 6, 2001	N/A	Drain Field	N/A	2.2	N/A
December 15, 2001	N/A	Drain Field	N/A	2.2	N/A
December 22, 2001	N/A	Drain Field	N/A	2.4	N/A
December 29, 2001	N/A	Drain Field	N/A	2.6	N/A
January 2, 2002	N/A	Drain Field	N/A	2.8	N/A
January 9, 2002	N/A	Drain Field	N/A	2.8	N/A

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1/14/02

Appendix C

Field Notes

NORTH LILY 4TH QUARTER SAMPLING 11/27/01
(2001)

I ARRIVED ON SITE THIS MORNING TO OBSERVE THE RE-FERTILIZATION AND RE-SEEDING OF THE SITE. AT 11:30 I WENT TO THE UPPER DISTRIBUTION BOX TO CONDUCT THE FOURTH QUARTER 2001 SAMPLING EVENT. I REMOVED THE COVERS AND INVESTIGATED THE WATER. IT WAS CLEAR WITH A LIGHT YELLOW TING. I THEN MEASURED THE DRAINAGE RATE AND FOUND IT TO BE ABOUT 2.5 GALLONS PER MINUTE. I THEN SAMPLED THE WATER FILLING UP ALL 4 OF THE SAMPLE BOTTLES AND SUPPLIED BY CHEMTECH-FORD. ONCE THIS WAS DONE I PUT THE SAMPLES ON ICE IN A COOLER AND THEN TRANSPORTED THEM TO THE LABORATORY.

SAMPLING TOOK PLACE @ 12:00 PM
DROP OFF TOOK PLACE @ 4:45 PM

This page is a reference page used to track documents internally for the Division of Oil, Gas and Mining

Mine Permit Number M0230007 Mine Name North Lily - Tintic Project
Operator Lily Mining Co. Date March 1, 2002
TO _____ FROM _____

☐ CONFIDENTIAL ☐ BOND CLOSURE ☐ LARGE MAPS ☐ EXPANDABLE
☐ MULTIPUL DOCUMENT TRACKING SHEET ☐ NEW APPROVED NOI
☐ AMENDMENT ☐ OTHER _____

Description YEAR-Record Number

☐ NOI ☐ Incoming ☐ Outgoing ☐ Internal ☐ Superceded

☐ NOI ☐ Incoming ☐ Outgoing ☐ Internal ☐ Superceded

☐ NOI ☐ Incoming ☐ Outgoing ☐ Internal ☐ Superceded

☐ NOI ☐ Incoming ☐ Outgoing ☐ Internal ☐ Superceded

☐ TEXT/ 8 1/2 X 11 MAP PAGES ☐ 11 X 17 MAPS ☐ LARGE MAP

COMMENTS: _____

CC: _____